



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/701,156

11/04/2003

Yuji Iwata

9319G-000585

5516

27572

7590

05/22/2006

HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 828

BLOOMFIELD HILLS, MI 48303

EXAMINER

HSIEH, SHIH WEN

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/701,156

Applicant(s)

IWATA, YUJI

Examiner

Shih-wen Hsieh

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 is/are allowed.
- 6) ☒ Claim(s) 1-3, 8 and 10 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-6-06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshiro (JP 08-117668, from IDS dated Oct. 13, 2005).

In regard to:

Claim 1:

Yoshiro teaches:

A method for discharging a liquid material, comprising:

discharging a liquid material (17, fig. 3) onto a substrate (11, figs. 1 and 3) from a discharging apparatus (15, 18 and 19, figs. 1 and 3) having a discharging head (15, fig. 1) which discharges the liquid material; and

providing an ionized wind (24c, fig. 2) onto the substrate, at least after discharging the liquid material onto the substrate, refer to the English constitution, the last four lines; page 3 [0006] and page 4 [0012] to page 5 [0017].

Claim 2:

Yoshiro further teaches:

wherein said substrate comprises a plurality of easily chargeable constituent elements, refer to page 3 [0006] to page 4 [0011], and

wherein the discharging method further comprises providing the ionized wind on the substrate before discharging the liquid material, refer to page 2, claim 1 and page 3 [0006] to page 4 [0011].

Claim 8:

Yoshiro further teaches:

A discharging apparatus for a liquid material, comprising:

a substrate holding part (14, fig. 1) for holding a substrate (11, fig. 1), refer to page [0012];

a discharging head (15, fig. 1) for discharging the liquid material (17, figs. 1 and 3) onto the substrate; and

an ionized wind producing unit (23, fig. 1) for providing an ionized wind on said substrate, refer to page 4[0014] wherein

said substrate comprises an easily chargeable constituent, refer to page 4 [0012], line 3; and

said ionized wind producing unit provides said ionized wind onto to the substrate, at least after said discharging head discharging the liquid material onto the substrate, refer to the English constitution, the last four lines; page 3 [0006] and page 4 [0012] to page 5 [0017].

Claim 10:

A discharging apparatus for a liquid material comprising:

a substrate holding part for holding a substrate;  
a discharging head for discharging the liquid material onto said substrate;  
an ionized wind producing unit for providing an ionized wind onto said substrate;  
and  
an exhaust means provided along a direction where said ionized wind from said ionized wind producing unit is blowing.

**Rejection:**

The substrate holding part, the discharging head and the ionized wind producing unit are rejected on the basis as set forth for claim 9 discussed above.

For the exhaust means, please refer to page 3 [0006] to [0008], in which, the ventilation means corresponds to the exhaust means in this claim.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiro.  
Yoshiro teaches the substrate is a printed circuit board (see page 4 [0012], line

3).

The device of Yoshiro DIFFERS from claim 3 in that it does not teach:

wherein at least one of said easily chargeable constituent is an active element.

A printed circuit board contains a variety of circuit elements for a particular purpose is well known in the art, refer to MPEP 2144.03, In re Malcolm, 129 F.2d 529, 54 USPQ 235 (CCPA 1942).

Therefore it would have been an obvious matter that elements contained in the printed circuit board are at least some are active.

***Allowable Subject Matter***

5. Claim 9 is allowed.

6. Claims 4, 5, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

In regard to:

Claims 4 and 5:

The primary reason for the allowance of claims 4 and 5 is the inclusion of the limitation of wherein said liquid material is made of an easily chargeable constituent

Art Unit: 2861

elements. It is this limitation found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Claim 11:

The primary reason for the allowance of claim 11 is the inclusion of the limitation of an electronic device in which one part of a constituent element is formed using a discharging apparatus according to claim 1. It is this limitation found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claim 12:

The primary reason for the allowance of claim 12 is the inclusion of the limitation of an electronic device in which at least one part thereof is made using a discharging apparatus according to claim 8. It is this limitation found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

**Conclusion**

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-5 and 8-12 have been considered but are moot in view of the new ground(s) of rejection.

JP 08-117668 provided in the IDS dated Oct. 13, 2005 has been use in this office action. Examiner believes teachings from this reference part of the claims. For those claims not taught by this reference explicitly or implicitly are indicated as allowable subject matters.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.




Art Unit: 2861


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on 571-272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**SHIH-WEN HSIEH**  
**PRIMARY EXAMINER**

  
Shih-wen Hsieh  
Primary Examiner  
Art Unit 2861

SWH

  
May 16, 2006